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12-4-2019

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Recommended Citation

Goldy, Ron G., "Performance of 10 Slicing Cucumbers in Southwest Michigan" (2019). *Midwest Vegetable Trial Reports*. Paper 4.
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Performance of 10 Slicing Cucumbers in Southwest Michigan

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Objectives

To evaluate performance of ten slicing cucumber selections for adaptability to Southwest Michigan growing conditions.

Summary

Fruit quality and yield were lower than in previous Southwest Michigan Research and Extension Center slicing cucumber trials. This may primarily be to lower bee activity affecting pollination, fruit set and fruit shape. However, from this trial Bristol, SVCS0927, LS 75-1011, Darlington, and Perfect 10 deserve consideration for further commercial planting in Southwest Michigan.

Methods

Planting

Each entry was direct seeded, two seed/hill on 29 May 2019 into a plastic mulched, raised bed containing a single drip irrigation tape. Spacing was 5.5 feet between rows and 18 inches in the row for a plant count of 10,560 plants per acre. There were 16 plants per plot with four replications per entry. The trial was planted and analyzed as a completely randomized design.

Fertilizer

Prior to bed shaping, 33-0-0, 0-0-64, sulfur and Solubor were broadcast and incorporated at 100, 175, 27 and 10 pounds per acre, respectively. After planting, liquid 28-0-0 was applied through the drip system once a week at 1-pound nitrogen/acre/day. Drip fertilization began 17 June and ended 12 August for a post-plant total of 63 pounds/acre nitrogen.

Weed control

Weeds were controlled through mechanical cultivation and hoeing

Plant care

Plants were irrigated as needed and pests controlled using recommended commercial practices.

Harvest and data collection

Plots were harvested 12 times between 17 July and 14 August and graded into number 1, number 2 and cull fruit.

Results

Yields for the 2019 trial were some of the lowest we have had for slicing cucumbers at the Southwest Michigan Research and Extension Center. There was also a higher than usual percentage of number 2 and cull fruit. The highest percentage of Number 1 fruit in the 2019 trial was 46%. The number is generally in the 60% or higher range. Most culls consisted of poorly formed and crooked fruit, indicating poor pollination. Beehives were not immediately next to the trial; however, there were four hives within 900-feet and the weather during the bloom period was generally conducive for bee flight. There were bee-attractive crops close to the trial such as squash, pumpkins, and sweet corn which bees may have found more appealing.

Total yield for the ten entries ranged from 511 to 874, 1-1/9 boxes/acre with six entries having statistically similar total yields (Table 1). Five entries (Bristol, SVCS0927, LS 75-1011, Darlington, and Perfect 10) had similar Number 1 yield. LS 75-1014 stood alone in having the lowest number of cull fruit (Table 1).

Variety performance changes yearly and between growers. Based on this trial, varieties that deserve grower evaluation include Bristol, SVCS0927, LS 75-1011, Darlington, and Perfect 10.

Table 1. Yield in 1-1/9 bushel cartons/acre of 10 cucumber selections in 2019 at the Southwest Michigan Research and Extension Center, Benton Harbor, Michigan. Spacing was 5.5' between rows and 1.5' in the row with two plants/hill) 10,560 plants/acre).

Variety	Seed ¹ Source	Total Yield	Yield No. 1	% No. 1	Yield No. 2	Yield Cull
Bristol	SE	874²	372	43	151	351
Bejo 3211	BE	785	238	30	158	389
LS 75-1011	LS	711	308	43	121	282
Darlington	SE	706	289	41	128	289
SVCS0927	SE	706	324	41	64	318
Perfect 10	CF	699	279	40	96	325
LS 75-1014	LS	622	251	40	135	236
SVCS0087	SE	595	202	34	117	276
Bejo 3080	BE	519	108	21	91	320
Lagos	BE	511	137	27	115	259
	Isd 0.05	245	118		71	143

¹SE: Seminis Seeds, BE: Bejo Seeds, LS: Lark Seeds, CF: Clifton Seeds

²Letters in bold in the same column are not statistically different from the highest number in that column.



Figure 1. Ten Slicing cucumber selections grown 2019 at the Southwest Michigan Research and Extension Center, Benton Harbor, Michigan. Front row, left to right: Bejo 3211, Bejo 3080, Lagos, LS 75-1014, and LS 75-1011. Back row, left to right: Perfect 10, Bristol, Darlington, SVCS0087, and SVCS0927



Figure 2. Three Slicing cucumber selections grown 2019 at the Southwest Michigan Research and Extension Center, Benton Harbor, Michigan. Left to right: Bristol, Bejo 3211, and LS 75-1011.



Figure 3. Three Slicing cucumber selections grown 2019 at the Southwest Michigan Research and Extension Center, Benton Harbor, Michigan. Left to right: SVCS0927, Darlington, and Perfect 10



Figure 4. Three Slicing cucumber selections grown 2019 at the Southwest Michigan Research and Extension Center, Benton Harbor, Michigan. Left to right: LS 75-1014, SVCS0087, and Bejo 3080.



Figure 5. Lagos slicing cucumber grown 2019 at the Southwest Michigan Research and Extension Center, Benton Harbor, Michigan.